

Candice Swift

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Education

University of California – Santa Barbara **2015-2016**

Graduate student, Chemical Engineering, O'Malley lab (present)

University of Wisconsin – Madison

B.S. Chemical Engineering (2010) G.P.A. = 3.99/4.00

Work Experience

Veolia Water Solutions & Technologies **2014 to 2015**

Veolia Water Solutions & Technologies is the global leader in large-scale, highly integrated process solutions utilizing HPD evaporation and crystallization technology in a broad range of industries.

Project Specialist, Plainfield, IL (3/14-5/15)

Principle duties included:

- Support the project manager in the project execution of industrial design/build chemical process systems.
- Finalize equipment process calculations, develop design drawings and procurement specifications, review vendor quotations and issue procurement recommendations.

Valero Energy Corporation **2013 to 2014**

Valero Energy Corporation is a Fortune 500 international manufacturer and marketer of transportation fuels and operates 16 petroleum refineries

Process Engineer, Port Arthur Refinery, TX (3/13 to 3/14)

Principal activities included:

- Unit engineer for the Fluid Catalytic Cracking (FCC) and Gas Oil Hydrotreater units
- Make daily recommendations to operations for unit optimization, troubleshooting, provide process support for unplanned and planned unit turnarounds/catalyst changes, management of change, maintain operating envelopes and unit mass balance, provide requested process data to other departments, perform necessary environmental emissions calculations, write weekly yield updates and monthly process monitoring and optimization reports.

Honeywell UOP **2010 to 2012**

Honeywell's UOP is the leading international supplier and technology licensor for the petroleum refining, gas processing, and petrochemical industries.

Field Services Technical Advisor, Des Plaines, IL (2/12 to 2/13)

100% travel. Part of a global team assisting in pre-commissioning, commissioning, startup and troubleshooting of UOP licensed units. Principal activities included:

- Integrated Hydrotreating/Hydrocracking Unit Startup: inspected vessels and piping in the field, constructed unit mass balance spreadsheet for performance guarantee test and unit monitoring, advised the customer regarding catalyst loading quality, testing of emergency depressurization system, catalyst activation, and startup. (6 mos.)
- Distillate Hydrotreating Unit Startup: advised on catalyst loading, catalyst activation, startup, emergency procedures, and unit stabilization. (3 mos.)

Development Engineer, Des Plaines, IL (8/10 to 2/12)

Assigned to technology center headquarters. Principal activities included:

- *Hydroprocessing Technical Services*: assisted specialists with client technical support. (4 mos.)

- *FCC Development*: coordinated pilot plant test runs and analyzed data. Awarded financial performance recognition for improvement of catalyst flow measurement device. Presented results at company technical symposium poster session. Presented new pilot plant data to the internal refining community. (9 mos.)
- *FCC Pilot Plant Operations*: operated pilot plant working on a shift schedule and earned Six Sigma Green Belt certification for plant improvement projects. (3 mos.)

Procter and Gamble

2008 to 2009

Research and Development Internship, Cincinnati, OH (Summer 2009)

Principal activities included:

- Led consumer benefits study for new technical advancement in papermaking using state-of-the-art analysis techniques.
- Identified papermaking process controls to further enhance new technical advancement.

Manufacturing Internship, Green Bay, WI (Summer 2008)

Principal activities included:

- Successfully completed five plant improvement projects in 14 weeks.

Undergraduate Research

Chemical and Biological Engineering 599, UW-Madison (Spring and Fall Semesters 2009)

- Assisted graduate students in Professor Nicholas Abbott's group.
- Researched the orientational anchoring transitions of thermotropic liquid crystals (LC) at LC-aqueous interfaces.
- Published in *Langmuir* in 2012.

Research Experience for Undergraduates, University of Illinois, Center for Nanoscale Chemical-Electrical-Mechanical Manufacturing Systems (Summer 2007)

- Assisted graduate student in Professor Nicholas Fang's group in the Mechanical Science and Engineering department.
- Studied the phenomenon of Localized Surface Plasmon Resonance (LSPR) in nanoparticle patterns etched on silver thin films by solid-state superionic stamping.
- Wrote paper featured in University of Illinois undergraduate research journal NanoPages.

Publications

Carlton, Rebecca J.; Gupta, Jugal K.; Swift, Candice L.; Abbott, N.L., "Influence of Simple Electrolytes on the Orientational Ordering of Thermotropic Liquid Crystals at Aqueous Interfaces", *Langmuir* 28(1), 31-36, 2012.

Undergraduate Scholarships

American Chemical Society Scholar, Chancellor's Scholar, Leaders in Engineering Excellence and Diversity

Volunteer Experience

International Volunteer HQ, Xi'an, China (Summer 2015)

- Taught beginner level English to children ages 6-13.